PCT09

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/856,681

DATE: 09/13/2001
TIME: 17:40:26

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Input Set : A:\Sequence.txt

Output Set: N:\CRF3\09132001\1856681.raw

Does Not Comply
Corrected Diskette Needed

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3 <110> APPLICANT: Behl, Christian
6 <120> TITLE OF INVENTION: Human semaphorin 6A-1 (SEMA6A-A), a gene involved
        Klostermann, Andreas
        in neuronal development and regeneration mechanisms
        during apoptosis, and its use as a potential drug target
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8
10 <130> FILE REFERENCE: 48498-258443
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12 <140> CURRENT APPLICATION NUMBER: 09/856,681
13 <141> CURRENT FILING DATE: 2001-05-22
15 <150> PRIOR APPLICATION NUMBER: PCT/EP99/09215
16 <151> PRIOR FILING DATE: 1999-11-26
18 <150> PRIOR APPLICATION NUMBER: 98122441.3
19 <151> PRIOR FILING DATE: 1998-11-26
21 <160> NUMBER OF SEQ ID NOS: 7
23 <170> SOFTWARE: PatentIn Ver. 2.1
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## ERRORED SEQUENCES

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323 Trp Lys Ser Arg Gln Ala Asp Val Asp Thr Cys Arg Met Lys Gly Lys
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326 His Lys Asp Glu Cys His Asn Phe Ile Lys Val Leu Leu Lys Lys Asn
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                                 120
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                             135
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 335 Gly Met Ala Arg Cys Pro Tyr Asp Ala Lys His Ala Asn Val Ala Leu
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 338 Phe Ala Asp Gly Lys Leu Tyr Ser Ala Thr Val Thr Asp Phe Leu Ala
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 339
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RAW SEQUENCE LISTING

DATE: 09/13/2001 TIME: 17:40:26 PATENT APPLICATION: US/09/856,681

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\09132001\1856681.raw

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341	Ile	Asp	Ala	Val	Ile	Tyr	Arg	Ser 200	Leu	Gly	Glu	Ser	Pro 205	Thr	Leu	Arg
342 344 :	Thr	Val	Lys	His	Asp	Ser	Lys 215	Trp	Leu	Lys	Glu	Pro 220	Tyr	Phe	Val	Gln
345 347	Ala	210 Val	Asp	Tyr	Gly	Asp	Tyr	Ile	Tyr	Phe	Phe 235	Phe	Arg	Glu	Ile	Ala 240
348 :	225 Val	Glu	Tyr	Asn	Thr	230 Met	Gly	Lys	Val	Val	Phe	Pro	Arg	Val	Ala 255	Gln
351 352	v-1	Cve	Lvs	Asn	245 Asp	Met	Gly	Gly	Ser	250 Gln	Arg	Val	Leu	Glu 270	Lys	Gln
354	vaı	-ys	Д <sub>2</sub> 5	260	LOU	T.V.C	Δla	Arq	265 Leu	Asn	Cys	Ser	Val	Pro	Gly	Asp
356 357	Trp	Thr	275	Pne	Leu	цуз	71a	280	Cln	Δla	Val	Thr	285 Asp	Val	Ile	Arg
359 360	Ser	His 290	Phe	Tyr	Phe	Asn	295	Leu	GIII	Alu	Dha	300	Thr	Val	Ͳvr	Asn
362	Ile	Asr	Gly	Arg	Asp	Val 310	Val	Leu	Ala	TUI	315	561	T	Pro	-1- Tle	320 Ala
365	Ser	Ile	Pro	Gly	Ser 325	Ala	Val	Cys	Ala	Tyr 330	Asp	Met	Leu	Asp	335	Alu al
366 368	Ser	Va.	l Phe	e Thr	Gly	Arg	Phe	Lys	Glu 345	Glr	Lys	s Ser	Pro	Asp 350	Ser	Thr
369 371	Trp	Th	r Pro	340 Val	Pro	Asp	Glu	Arg	Val	Pro	ь Гл	Pro	Arg 365	Pro	Gly	Cys
372 374	Cys	. Ala	35! a Gl	5 y Sei	r Ser	ser	Leu	ı Glu	Arg	ј Ту:	r Ala	a Thr	Ser	Asn	Glu	Phe
375 377	Pro	37 As	0 p As	p Thi	r Lei	ı Ası	375 Phe	o ∍ Il∈	Lys	3 Th	r Hi	s Pro	Leu	ı Met	Asp	Glu 400
378	385	) 1/a	l Dr	o Sei	r Ile	390 Phe	) e Ası	n Arg	, Pro	o Tr	39. P Ph	e Leu	ı Arg	J Thr	Met	Val
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389	Ly	s Ph 45	e Le 50	u Al	a Ar	g Il	e Gl 45	y Ası 5	n se	r Gi	у РП	46	0	n Asp	∽ Пла	^ <b>\</b> Q1
392	Ph	e Le	eu Gl	u Gl	u Me	t Se 47	r Va O	1 Ty:	r As	n Se	r G1	.u ьу. '5	s Cy	s Sei	LIYI	48
395	6 Gl	y Va	al G1	u As	р Ly 48	s Ar	g Il	e Me	t Gl	y M∈ 49	t Gl 0	n Le	u As	p Ar	49	i se
396 398	s B Se	r Se	er Le	eu Ty	r Va	1 Al	a Ph	e Se	r Th	r Cy	s Vā	al Il	e Ly	s Va 51	l Pro O	o Le
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40	8 54	5	hr A	sn G	lv Le	55 eu Gl	50 Ly As	зр Су	s Hi	is A	5. sn S	55 er Ph	ne Va	al Al	a Le	u As
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DATE: 09/13/2001 RAW SEQUENCE LISTING TIME: 17:40:26 PATENT APPLICATION: US/09/856,681

Input Set : A:\Sequence.txt

Output Set: N:\CRF3\09132001\1856681.raw

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414 416	n 1 -		:In	Glu	Glv	T	yr (	Glu	Ser	Arg	G.	ly '	Gly	Met	Lei	1 #	Asp	Trp	רי	/S I	115
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417 419	т от	, т	<u> </u>	Asp	ser	P	ro .	Asp	Ser	Thr	Α	sp	Pro	Leu	Gl	Y E	Ala	vaı	56	ST ?	)CI
419	LIE		510	F				_	615		•				62	U	_	<b></b>	т.	<b></b> 1	170
420 422	111	~ 7	) En	His	Gln	Α	gp	Lys	Lys	Gly	V	al	Ile	Arg	Gl	u :	ser	туг	T.	eu :	e v u
422	62	5 <i>f</i> 5	7511	1110	0		-	630						635			- 1 .	21-	3.7	- 1	T10
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437	7.0	u 5	261	GIJ	шо.			710	_					71	5		_	1			720
430	7 0	· )	тlа	T.e.i	ሞክ	r I	Pro	Leu	Met	Hi	s A	Asn	Gly	Ly	s Le	eu	Ala	Tn:		10	GIY
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46	<u>.</u> 4 т	hr	Le	u Gl	u Ty	yr	Lys	3 Th	r Il	e Ly	γs	Glu	ı Hi	s Le	eu s	er	. se.	ר ה	3	501	
46	5		85	0	-				85	5			_	_	č	60	. T ^	11 D1	-0	pro	I.V.
46	7 A	sn	Hi	s Gl	y Va	al	Ası	n Le	u Va	1 G	lu	Ası	n Le	u A	sp S	er	. це	u Pl			880
46	8 8	65	,					87	0				_	·	75 ~~ (	·1 -	, <sub>7</sub> , 7	a C	٦r	Len	Se
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47	2					-	88	5					89	)U	i	<b>1</b>		r C	⊃r	Set	TV
47	4 (	31r	Th	r Gl	y L	eu	se	r Ly	s Ar	g L	eu	GI	u M∈	et H	TR I	11.5	, ,,	. <u>.</u> 0	10		-1
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47	7 (	313	, Va	1 As	зр Т	yr	Ly	s Ar	g Se	er T	yr	Pr	O TI	ır A	S11 3	) e .	വാ	5		:	,
47	78	- 1		9:	١5					9	20	_	_		h	λ a ·	9 <i>4</i> n Ga	יי אר פ	еr	Ası	ı Se
48	30 1	lis	s G1	n A	la T	hr	Th	r Le	u Ly	7s A	rg	As	n As	sn T	11.1	941	n N				
4.5	31		93	30					93	35				1		741 71.	υ λ.	an A	qп	Pr	o Pr
48	33	Sei	r Hi	s L	eu S	er	Ar	g As	n G	ln S	er	Ph	ie G	тА Ъ	119	GT.	y AS	יר ע			96
4 8	34	94	5					95	50					و المارة	155	ប÷	e 94	or S	er	G1	n Pr
4 8	36	Pro	o Al	La P	ro G	:ln	Ar	95 g Va	al A	sp S	er	: 11	.e G	20 TII A	αI	IJΙ	J 50			97	5
	87						96	5					9	70						٠.	_

RAW SEQUENCE LISTING DATE: 09/13/2001 PATENT APPLICATION: US/09/856,681 TIME: 17:40:26

Input Set : A:\Sequence.txt

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                    100
     907 His Lys Asp Glu Cys His Asn Phe Ile Lys Val Leu Leu Lys Lys Asn
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     910 Asp Asp Ala Leu Phe Val Cys Gly Thr Asn Ala Phe Asn Pro Ser Cys
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                               135
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     916 Gly Met Ala Arg Cys Pro Tyr Asp Ala Lys His Ala Asn Val Ala Leu
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                        165
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     923 195
     925 Thr Val Lys His Asp Ser Lys Trp Leu Lys Glu Pro Tyr Phe Val Gln
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      931 Val Glu Tyr Asn Thr Met Gly Lys Val Val Phe Pro Arg Val Ala Gln
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      934 Val Cys Lys Asn Asp Met Gly Gly Ser Gln Arg Val Leu Glu Lys Gln
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DATE: 09/13/2001 RAW SEQUENCE LISTING TIME: 17:40:26 PATENT APPLICATION: US/09/856,681

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\09132001\1856681.raw

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944 Ile Asn Gly Arg Asp Val Val Leu Ala Thr Phe Ser Thr Pro Tyr Asn 945 305 305 305 310 320 335 335 335 335 335 335 335 336 335 335											
947 Ser Ile Pro Gly Ser Ala Val Cys Ala Tyr Asp Met Leu Asp Ile Ala 335 948 925 950 Ser Val Phe Thr Gly Arg Phe Lys Glu Gln Lys Ser Pro Asp Ser Thr 340 355 951 340 360 365 953 Trp Thr Pro Val Pro Asp Glu Arg Val Pro Lys Pro Arg Pro Gly Cys 360 365 954 355 360 365 955 Cys Ala Gly Ser Ser Ser Leu Glu Arg Tyr Ala Thr Ser Asn Glu Phe 367 370 375 959 Pro Asp Asp Thr Leu Asn Phe Ile Lys Thr His Pro Leu Met Asp Glu 396 385 390 962 Ala Val Pro Ser Ile Phe Asn Arg Pro Trp Phe Leu Arg Thr Met Val 405 410 415 963 400 405 964 420 420 965 Arg Tyr Arg Leu Thr Lys Ile Ala Val Asp Thr Ala Ala Gly Pro Tyr 966 420 450 971 Lys Phe Leu Ala Arg Ile Gly Asn Ser Gly Phe Leu Asn Asp Ser Leu 969 455 977 Gly Val Glu Asp Lys Arg Ile Met Gly Met Gln Leu Asp Arg Ala Ser 978 980 Ser Ser Leu Tyr Val Ala Phe Ser Thr Cys Val Ile Lys Val Pro Leu 981 500 983 Gly Arg Cys Glu Arg His Gly Lys Cys Lys Lys Thr Cys Ile Ala Ser 984 515 986 Arg Asp Pro Tyr Cys Gly Trp Ile Lys Glu Gly Ala Cys Ser His 987 530 988 Ala Gln Glu Gly Fro Gly Asp Ser Fro Gly His Asp Ser Phe Val Ala Leu Asp 989 545 990 545 991 Lys Cys Lys Thr Thr Cys Ile Ala Ser 992 Asn Thr Asp Gly Leu Gly Asp Cys His Asn Ser Phe Val Ala Leu Asp 993 995 Gly His Ser Ser Ser Leu Leu Pro Ser Thr Thr Thr Ser Asp Ser Thr 996 545 997 Gly His Ser Ser Ser Leu Leu Pro Ser Thr Thr Thr Ser Asp Ser Thr 997 546 500 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Gly Met Leu Asp 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Gly Met Leu Asp 999 595 1001 Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Gly Ala Val Ser Ser 1002 610 1004 His Asn His Gln Asp Lys Lys Gly Val Ile Arg Glu Ser Tyr Leu Lys 1005 625 1000 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1000 665 1000 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1001 Leu Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1002 625 1003 Leu Lala Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1003 665	942 290		val V	al Leu	Ala '	Thr Pho	e Ser	Thr I	?ro '	Tyr	Asn
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951	948	325			a1 .	330 31 m Trr	a Cor	Dro i	Δsn	Ser	Thr
951	950 Ser Val Phe	e Thr Gly	Arg F	he Lys	GIU	GIII DA	2 261	110	35N		
956 Cys Ala Gly Ser Ser Leu Glu Arg Tyr Ala Thr Ser Asn Glu Phe 375 370 959 Pro Asp Asp Thr Leu Asn Phe Ile Lys Thr His Pro Leu Met Asp Glu 380 960 385 962 Ala Val Pro Ser Ile Phe Asn Arg Pro Trp Phe Leu Arg Thr Met Val 405 963 965 Arg Tyr Arg Leu Thr Lys Ile Ala Val Asp Thr Ala Ala Gly Pro Tyr 430 968 Gln Asn His Thr Val Val Phe Leu Gly Ser Glu Lys Gly Ile Ile Leu 455 971 Lys Phe Leu Ala Arg Ile Gly Asn Ser Gly Phe Leu Asn Asp Ser Leu 470 972 450 974 Phe Leu Glu Glu Met Ser Val Tyr Asn Ser Glu Lys Cys Ser Tyr Asp 485 975 465 976 Gly Val Glu Asp Lys Arg Ile Met Gly Met Gln Leu Asp Arg Ala Ser 980 Ser Ser Leu Tyr Val Ala Phe Ser Thr Cys Val Ile Lys Val Pro Leu 981 500 983 Gly Arg Cys Glu Arg His Gly Lys Cys Lys Lys Thr Cys Ile Ala Ser 984 515 986 Arg Asp Pro Tyr Cys Gly Trp Ile Lys Glu Gly Gly Ala Cys Ser His 987 530 988 Gly Arg Cys Glu Arg His Gly Lys Cys His Asn Ser Phe Val Ala Leu Asn 989 Ser Ser Pro Asn Ser Arg Leu Thr Phe Glu Gln Asp Ile Glu Arg Gly 990 545 992 Asn Thr Asp Gly Leu Gly Asp Cys His Asn Ser Phe Val Ala Leu Asn 999 595 1001 Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Asp Typ Lys His 999 595 1001 Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Asp Typ Lys His 1006 605 1004 His Asn His Gln Asp Lys Lys Gly Val Ile Arg Glu Ser Tyr Leu Lys 1008 645 1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Val Ile 1008 1008 645 1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1008 1001 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Val Ile 1008 1001 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1001 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1001 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1001 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1006 625 1001 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1007 Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile 1008 1008 626 626 626 626 626 626 626 626 626 62											
956 Cys Ala Gly Ser Ser Leu Glu Arg Tyr Ala Thr Ser Asn Glu Phe 375 370 959 Pro Asp Asp Thr Leu Asn Phe Ile Lys Thr His Pro Leu Met Asp Glu 380 960 385 962 Ala Val Pro Ser Ile Phe Asn Arg Pro Trp Phe Leu Arg Thr Met Val 405 963 965 Arg Tyr Arg Leu Thr Lys Ile Ala Val Asp Thr Ala Ala Gly Pro Tyr 430 968 Gln Asn His Thr Val Val Phe Leu Gly Ser Glu Lys Gly Ile Ile Leu 455 971 Lys Phe Leu Ala Arg Ile Gly Asn Ser Gly Phe Leu Asn Asp Ser Leu 470 972 450 974 Phe Leu Glu Glu Met Ser Val Tyr Asn Ser Glu Lys Cys Ser Tyr Asp 485 975 465 976 Gly Val Glu Asp Lys Arg Ile Met Gly Met Gln Leu Asp Arg Ala Ser 980 Ser Ser Leu Tyr Val Ala Phe Ser Thr Cys Val Ile Lys Val Pro Leu 981 500 983 Gly Arg Cys Glu Arg His Gly Lys Cys Lys Lys Thr Cys Ile Ala Ser 984 515 986 Arg Asp Pro Tyr Cys Gly Trp Ile Lys Glu Gly Gly Ala Cys Ser His 987 530 988 Gly Arg Cys Glu Arg His Gly Lys Cys His Asn Ser Phe Val Ala Leu Asn 989 Ser Ser Pro Asn Ser Arg Leu Thr Phe Glu Gln Asp Ile Glu Arg Gly 990 545 992 Asn Thr Asp Gly Leu Gly Asp Cys His Asn Ser Phe Val Ala Leu Asn 999 595 1001 Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Asp Typ Lys His 999 595 1001 Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Asp Typ Lys His 1006 605 1004 His Asn His Gln Asp Lys Lys Gly Val Ile Arg Glu Ser Tyr Leu Lys 1008 645 1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Val Ile 1008 1008 645 1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1008 1001 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Val Ile 1008 1001 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1001 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1001 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1001 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1006 625 1001 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 1007 Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile 1008 1008 626 626 626 626 626 626 626 626 626 62	953 Tro Thr Pro	o Val Pro	Asp G	Glu Arg	Val	Pro Ly	s Pro	Arg	PIO	GTÄ	Cys
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959 Pro Asp Asp Thr Leu Asn Phe Ile Lys Thr H1s Pro Leu Rec Asp 390 960 385 992 Ala Val Pro Ser Ile Phe Asn Arg Pro Trp Phe Leu Arg Thr Met Val 415 963 965 Arg Tyr Arg Leu Thr Lys Ile Ala Val Asp Thr Ala Ala Gly Pro Tyr 420 966 Gln Asn His Thr Val Val Phe Leu Gly Ser Glu Lys Gly Ile Ile Leu 445 969 435 971 Lys Phe Leu Ala Arg Ile Gly Asn Ser Gly Phe Leu Asn Asp Ser Leu 460 972 450 974 Phe Leu Glu Glu Met Ser Val Tyr Asn Ser Gly Phe Leu Asn Asp Ser Leu 475 975 465 977 Gly Val Glu Asp Lys Arg Ile Met Gly Met Gln Leu Asp Arg Ala Ser 490 988 Ser Ser Leu Tyr Val Ala Phe Ser Thr Cys Val Ile Lys Val Pro Leu 510 981 500 983 Gly Arg Cys Glu Arg His Gly Lys Cys Lys Lys Thr Cys Ile Ala Ser 525 984 515 986 Arg Asp Pro Tyr Cys Gly Trp Ile Lys Glu Gly Gly Ala Cys Ser His 530 987 530 988 Leu Ser Pro Asn Ser Arg Leu Thr Phe Glu Gln Asp Ile Glu Arg Gly 560 990 545 991 Ser Ser Leu Gly Asp Cys His Asn Ser Phe Val Ala Leu Asn 575 992 Asn Thr Asp Gly Leu Gly Asp Cys His Asn Ser Phe Val Ala Leu Asn 599 993 565 994 Ala Glu Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp Trp Lys His 600 994 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp Trp Lys His 600 995 595 1001 Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Gly Ala Val Ser Ser 1002 1004 His Asn His Gln Asp Lys Lys Gly Val Ile Arg Glu Ser Tyr Leu Lys 640 1005 625 1000 His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile Ala Val Ile 1008 645 1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 645											
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962 Ala Val Pro Ser Ile Phe Asn Arg Pro Trp Phe Leu Arg Thr Met Val 415 963 965 Arg Tyr Arg Leu Thr Lys Ile Ala Val Asp Thr Ala Ala Gly Pro Tyr 420 968 Gln Asn His Thr Val Val Phe Leu Gly Ser Glu Lys Gly Ile Ile Leu 455 971 Lys Phe Leu Ala Arg Ile Gly Asn Ser Gly Phe Leu Asn Asp Ser Leu 455 974 Phe Leu Glu Glu Glu Met Ser Val Tyr Asn Ser Glu Lys Cys Ser Tyr Asp 480 975 465 976 Gly Val Glu Asp Lys Arg Ile Met Gly Met Gln Leu Asp Arg Ala Ser 480 977 Gly Val Glu Asp Lys Arg Ile Met Gly Met Gln Leu Asp Arg Ala Ser 480 980 Ser Ser Leu Tyr Val Ala Phe Ser Thr Cys Val Ile Lys Val Pro Leu 500 981 500 983 Gly Arg Cys Glu Arg His Gly Lys Cys Lys Lys Thr Cys Ile Ala Ser 520 984 515 520 985 Arg Asp Pro Tyr Cys Gly Trp Ile Lys Glu Gly Gly Ala Cys Ser His 530 989 Leu Ser Pro Asn Ser Arg Leu Thr Phe Glu Gln Asp Ile Glu Arg Gly 555 992 Asn Thr Asp Gly Leu Gly Asp Cys His Asn Ser Phe Val Ala Leu Asn 575 993 565 580 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp 590 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp Ser Thr Lys His 600 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp 590 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp 590 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp 590 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp 590 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp 590 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp 590 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp 590 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp 590 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp 590 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp 590 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp 590 999 595 1001 Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Gly Ala Val Ser Ser 600 1004 His Asp His Gln Asp Lys Lys Gly Val The Leu Ala Ile Ala Val Ile 655 1010 Leu Ala Phe Val Met Gly Ala Val Pro Val Thr Leu Leu Ala Ile Ala Val Ile 665											
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968 Gln Asn His Thr Val Val Phe Leu Gly Ser Glu Lys Gly Ile Ile Leu 445											
969	966	420		Dha Tau	Clu	Sar Gl	lu Lvs	Glv	Ile	Ile	Leu
969	968 Gln Asn Hi	s Thr Val	L Val	Pne Leu	GIY	261 01	Lu Ljo	445			
972	969 43	5		440	Cor	Clar Di	na T.e.11	Asn	Asp	Ser	Leu
972	971 Lys Phe Le	u Ala Arq	; Ile	GLY Asn	ser	GIY PI	160 160	71511	E		
975 465 977 Gly Val Glu Asp Lys Arg Ile Met Gly Met Gln Leu Asp Arg Ala Ser 978 980 Ser Ser Leu Tyr Val Ala Phe Ser Thr Cys Val Ile Lys Val Pro Leu 981 983 Gly Arg Cys Glu Arg His Gly Lys Cys Lys Lys Thr Cys Ile Ala Ser 984 515 986 Arg Asp Pro Tyr Cys Gly Trp Ile Lys Glu Gly Gly Ala Cys Ser His 987 530 989 Leu Ser Pro Asn Ser Arg Leu Thr Phe Glu Gln Asp Ile Glu Arg Gly 990 545 992 Asn Thr Asp Gly Leu Gly Asp Cys His Asn Ser Phe Val Ala Leu Asn 993 995 Gly His Ser Ser Ser Leu Leu Pro Ser Thr Thr Thr Ser Asp Ser Thr 996 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Gly Met Leu Asp Trp Lys His 999 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Gly Met Leu Asp Trp Lys His 999 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Gly Met Leu Asp Trp Lys His 999 998 Ala Gln Ser Pro Asp Ser Thr Asp Pro Leu Gly Ala Val Ser Ser 1001 Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Gly Ala Val Ser Ser 1002 1004 His Asn His Gln Asp Lys Lys Gly Val Ile Arg Glu Ser Tyr Leu Lys 1005 625 1007 Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile Ala Val Ile 1008 645 1010 Leu Ala Phe Val Met Gly Ala Val Pro Ser Gly Ile Thr Val Tyr Cys 670											
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977 Gly Val Glu Asp Lys Arg Ile Met Gly Met Gli Leu Asp 490  980 Ser Ser Leu Tyr Val Ala Phe Ser Thr Cys Val Ile Lys Val Pro Leu 981 500 983 Gly Arg Cys Glu Arg His Gly Lys Cys Lys Lys Thr Cys Ile Ala Ser 984 515 986 Arg Asp Pro Tyr Cys Gly Trp Ile Lys Glu Gly Gly Ala Cys Ser His 987 530 989 Leu Ser Pro Asn Ser Arg Leu Thr Phe Glu Gln Asp Ile Glu Arg Gly 990 545 992 Asn Thr Asp Gly Leu Gly Asp Cys His Asn Ser Phe Val Ala Leu Asn 993 565 995 Gly His Ser Ser Ser Leu Leu Pro Ser Thr Thr Thr Ser Asp Ser Thr 996 580 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp Trp Lys His 999 595 1001 Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Gly Ala Val Ser Ser 1002 610 1004 His Asn His Gln Asp Lys Lys Gly Val Ile Arg Glu Ser Tyr Leu Lys 1005 625 1007 Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile Ala Val Ile 1008 645 1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 665											
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981											
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983 Gly Arg Cys Glu Arg His Gly Lys Cys Lys Lys Thr Cys He Ala Ser 984 515 520 525  986 Arg Asp Pro Tyr Cys Gly Trp Ile Lys Glu Gly Gly Ala Cys Ser His 987 530 535 540  989 Leu Ser Pro Asn Ser Arg Leu Thr Phe Glu Gln Asp Ile Glu Arg Gly 990 545 550 560  992 Asn Thr Asp Gly Leu Gly Asp Cys His Asn Ser Phe Val Ala Leu Asn 993 565 570 575  995 Gly His Ser Ser Ser Leu Leu Pro Ser Thr Thr Thr Ser Asp Ser Thr 996 580 585 590  998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp Trp Lys His 999 595 600 600 605  1001 Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Gly Ala Val Ser Ser 1002 610 615 625 1004 His Asn His Gln Asp Lys Lys Gly Val Ile Arg Glu Ser Tyr Leu Lys 1005 625 630 635 640  1007 Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile Ala Val Ile 1008 645 650 665											
984	002 Clar Nrd C	ze Glu Ar	a His	Gly Lys	: Cys	Lys L	ys Thi	Cys	Ile	Ala	ser
986 Arg Asp Pro Tyr Cys Gly Trp Ile Lys Glu Gly Gly Ala Cys Ser His 987 530 535 540  989 Leu Ser Pro Asn Ser Arg Leu Thr Phe Glu Gln Asp Ile Glu Arg Gly 990 545 550 560  992 Asn Thr Asp Gly Leu Gly Asp Cys His Asn Ser Phe Val Ala Leu Asn 565 570 575  995 Gly His Ser Ser Ser Leu Leu Pro Ser Thr Thr Thr Ser Asp Ser Thr 996 580 585 590  998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp Trp Lys His 999 595 600 605  1001 Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Gly Ala Val Ser Ser 1002 610 615 625  1007 Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile Ala Val Ile 1008 645 650 665  1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys											
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987											
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999 595 600  1001 Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Gly Ala Val Ser Ser  1002 610 615 620  1004 His Asn His Gln Asp Lys Lys Gly Val Ile Arg Glu Ser Tyr Leu Lys  1005 625 630 630 635 640  1007 Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile Ala Val Ile  1008 645 655 650 655  1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys	998 Ala Gln G	lu Gly Ty	r Glu	Ser Ar	д Сту	дту г	IEC DE	4 MSP		-1	
1002 610  1004 His Asn His Gln Asp Lys Lys Gly Val Ile Arg Glu Ser Tyr Leu Lys  1005 625 630 635 640  1007 Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile Ala Val Ile  1008 645 650 655  1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys											
1002 610  1004 His Asn His Gln Asp Lys Lys Gly Val Ile Arg Glu Ser Tyr Leu Lys  1005 625 630 635 640  1007 Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile Ala Val Ile  1008 645 650 655  1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys	1001 Leu Leu	Asp Ser F	ro As	p Ser T	hr As	sp Pro	Leu G	TA WT	a vu	i D	C1
1004 His Asn His Gln Asp Lys Lys Gly Val The Arg Glu Ser Tyr Edu 275 1005 625 630 635 640 1007 Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile Ala Val Ile 1008 645 650 655 1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys											
1005 625  1007 Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile Ala Val Ile 1008  645  1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys 665  670	1004 His Asn	His Gln A	sp Ly	s Lys G	ly Va	al Ile	Arg G	ıu se	T 17	т т	בע הואם
1007 Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ald 116 1655  1008 645 650 655  1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys											
1008 645 630 1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys	1007 Glv Hie	Asp Gln I	Leu Va	l Pro V	al Th	nr Leu	Leu A	la Il	e Al	La V	ar rre
1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys											
	1010 700 310	Dhe Val 1	Met Gl	v Ala V	al Pl	he Ser	Gly I	le Th	ır Va	al T	yr Cys
1011 Val Cys Asp His Arg Arg Lys Asp Val Ala Val Val Gln Arg Lys Glu											
1013 Val Cys Asp his Arg Arg Dio hor the	1011	Agn Hig 5	Ara Ar	a Lvs A	sp Va	al Ala	Val V	al Gl	ln A	rg L	ys Glu
	1013 Val Cys	wah ura	ara ur	5 -10 L							

DATE: 09/13/2001 RAW SEQUENCE LISTING PATENT APPLICATION: US/09/856,681 TIME: 17:40:26

Input Set : A:\Sequence.txt

Output Set: N:\CRF3\09132001\1856681.raw

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680
           675
  1016 Lys Glu Leu Thr His Ser Arg Gly Ser Met Ser Ser Val Thr Lys
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                            695
  1017 690
  1019 Leu Ser Gly Leu Phe Gly Asp Thr Gln Ser Lys Asp Pro Lys Pro Glu
                                           715
                        710
  1022 Ala Ile Leu Thr Pro Leu Met His Asn Gly Lys Leu Ala Thr Pro Gly
                                        730
                     725
  1025 Asn Thr Ala Lys Met Leu Ile Lys Ala Asp Gln His His Leu Asp Leu
                                    745
  1028 Thr Ala Leu Pro Thr Pro Glu Ser Thr Pro Thr Leu Gln Gln Lys Arg
                  740
                                 760
   1029 755
   1031 Lys Pro Ser Arg Gly Ser Arg Glu Trp Glu Arg Asn Gln Asn Leu Ile
                             775
   1034 Asn Ala Cys Thr Lys Asp Met Pro Pro Met Gly Ser Pro Val Ile Pro
   1032 770
   1035 785
                        790
   1037 Thr Asp Leu Pro Leu Arg Ala Ser Pro Ser His Ile Pro Ser Val Val
                                         810
               805
   1040 Val Leu Pro Ile Thr Gln Gln Gly Tyr Gln His Glu Tyr Val Asp Gln
                                   825
   1041 820
   1043 Pro Lys Met Ser Glu Val Ala Gln Met Ala Leu Glu Asp Gln Ala Ala
                                                    845
                                 840
   1046 Thr Leu Glu Tyr Lys Thr Ile Lys Glu His Leu Ser Ser Lys Ser Pro
   1044 835
                             855
   1049 Asn His Gly Val Asn Leu Val Glu Asn Leu Asp Ser Leu Pro Pro Lys
                                            875
                          870
   1052 Val Pro Gln Arg Glu Ala Ser Leu Gly Pro Pro Gly Ala Ser Leu Ser
                                         890
   1055 Gln Thr Gly Leu Ser Lys Arg Leu Glu Met His His Ser Ser Ser Tyr
                      885
                                     905
   1059 Gly Val Asp Tyr Lys Arg Ser Tyr Pro Thr Asn Ser Leu Thr Arg Ser
                   900
                                  920
   1062 His Gln Ala Thr Thr Leu Lys Arg Asn Asn Thr Asn Ser Ser Asn Ser
                              935
   1065 Ser His Leu Ser Arg Asn Gln Ser Phe Gly Arg Gly Asp Asn Pro Pro
                                             955
                          950
    1068 Pro Ala Pro Gln Arg Val Asp Ser Ile Gln Val His Ser Ser Gln Pro
                                         970
                      965
    1071 Ser Gly Gln Ala Val Thr Val Ser Arg Gln Pro Ser Leu Asn Ala Tyr
                                     985
    1072 980 .
    1074 Asn Ser Leu Thr Arg Ser Gly Leu Lys Arg Thr Pro Ser Leu Lys Pro
    1075 995 1000 1005
    1077 Asp Val Pro Pro Lys Pro Ser Phe Ala Pro Leu Ser Thr Ser Met Lys
                   1015
    1078 1010
    1080 Pro Asn Asp Ala Cys Thr
E--> 1081(025)
        102)
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VERIFICATION SUMMARY
PATENT APPLICATION: US/09/856,681

DATE: 09/13/2001 TIME: 17:40:27

Input Set : A:\Sequence.txt

Output Set: N:\CRF3\09132001\1856681.raw

L:499 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2 L:1081 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:7